What is claimed is:

1. (Previously Amended)   An image decoding apparatus comprising:

   an analyzing section which determines a

5 process quantity of a coded image data in each of a plurality of image decoding processes per a unit process time determined based on a parameter for said coded image data, prior to said plurality of image decoding processes; and

10   an image decoding section which carries out each of said plurality of image decoding processes to said coded image data for the determined process quantity such that a decoded image data is generated from said coded image data.

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2. (Original) The image decoding apparatus according to claim 1, wherein said parameter is an internal parameter of said coded image data.

20 3. (Original) The image decoding apparatus according to claim 1, wherein said parameter is an external parameter for said coded image data.

4. (Original) The image decoding apparatus according
25 to claim 1, wherein said parameter contains an internal parameter of said coded image data, and an external parameter for said coded image data.

5.(Amended)   The image decoding apparatus according to claim 1wherein said coded image data comprises a plurality of code blocks, and

5   said analyzing section determines said process quantity to each of said plurality of image decoding processes by determining a code block process quantity for each of said plurality of code blocks based on said unit process time.

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6.(Amended)   The image decoding apparatus according to claim 1, wherein said coded image data is a part of a coded stream,

          a stream process time of said coded stream is
15 previously determined, and

          said unit process time is determined based on a number of said coded image data in said coded stream and said stream process time.

20 7.(amended)   The image decoding apparatus according to claim 6, wherein said plurality of decoding processes contains an arithmetic decoding process, a bit modeling decoding process, an inverse quantization process and an inverse wavelet transform process, and

25   said image decoding section carries out a set of said arithmetic decoding process and said bit modeling decoding process, said inverse quantization

process, and said inverse wavelet transform process in a pipeline.

8.(amended)   The image decoding apparatus according to claim 7, wherein said image decoding section comprises:

an arithmetic decoding section which carries out said arithmetic decoding process to said coded image data for the determined process quantity;

a bit modeling decoding section which carries out said bit modeling decoding process to a result of said arithmetic decoding process by said arithmetic decoding section in a form of bit planes every color component for the determined process quantity;

an inverse quantization section which carries out said inverse quantization process to a result of said bit modeling decoding process by said bit modeling decoding section for the determined process quantity; and

an inverse wavelet transform process section which carries out said inverse wavelet transform process to a result of said inverse quantization process by said inverse quantization section for the determined process quantity.

9.(Amended)   The image decoding apparatus according to claim 1, wherein said coded image data is packed

into a plurality of layers,

said analyzing section determines a number of layers to be decoded based on said process quantity of said coded image data in said inverse quantization

5   process and said process quantity of said coded image data in said inverse wavelet transform process, and

said image decoding section carries out each of said plurality of decoding processes to said coded image data for the determined number of layers to be

10   decoded.

10.(amended) The image decoding apparatus according to claim 9, wherein said analyzing section discards a part of said coded image data other than a part of

15 said coded image data associating with the determined number of layers to be decoded.

11.(Amended) The image decoding apparatus according to claim 9, wherein said plurality of decoding

20 processes contain an arithmetic decoding process, a bit modeling decoding process, an inverse quantization process and an inverse wavelet transform process,

each of said plurality of layers of said coded image data contains a plurality of code blocks,

25   said parameter contains a weight coefficient allocated to each of said plurality of code blocks,

said analyzing section determines a number of

coding paths in said arithmetic decoding process and said bit modeling decoding process to each of said plurality of code blocks from said weight coefficients and said unit process time, and determines a number of

5 bit planes from the determined coding paths, and

said image decoding section carries out said inverse quantization process and said inverse wavelet transform process to said coded image data for the determined number of bit planes.

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12.(Previously Amended)   An image decoding method of decoding a decoded image data from a coded image data through a plurality of decoding processes, comprising:

determining a process quantity of said coded

15 image data in each of said plurality of image decoding processes per a unit process time determined based on a parameter for said coded image data; and

carrying out said plurality of image decoding processes to said coded image data for the determined

20 process quantities.

13.(Original) The image decoding method according to claim 12, wherein said parameter is an internal parameter of said coded image data.

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14.(Original) The image decoding method according to claim 12, wherein said parameter is an external

parameter for said coded image data.

15. (Original) The image decoding method according to claim 12, wherein said parameter contains an internal

5   parameter of said coded image data, and an external parameter for said coded image data.

16. (Amended) The image decoding method according to claim 12, wherein said coded image data contains a

10 plurality of code blocks,

said determining a process quantity comprises:

determining said process quantity by determining a code block process quantity allocated to

15 each of said plurality of code blocks based on said unit process time.

17. (Amended) The image decoding method according to claim 12, wherein said coded image data is a part of a

20 coded stream,

a stream process time of said coded stream is predetermined, and

said image decoding method further comprises:

determining said unit process time based on a

25 number of said coded image data in said coded stream and said stream process time.

18.(Amended) The image decoding method according to claim 17, wherein said plurality of decoding processes contain an arithmetic decoding process, a bit modeling decoding process, an inverse quantization process and

5   an inverse wavelet transform process,

said carrying out said plurality of image decoding processes comprises:

carrying out a set of said arithmetic decoding process and said bit modeling decoding

10 process, said inverse quantization process, and said inverse wavelet transform process in a pipeline.

19.(Amended) The image decoding method according to claim 12, wherein said carrying out said plurality of

15 image decoding processes comprises:

carrying out said arithmetic decoding process to said coded image data for the determined process quantity;

carrying out said bit modeling decoding

20 process to a result of said arithmetic decoding process for the determined process quantity;

carrying out said inverse quantization process to a result of said bit modeling decoding process for the determined process quantity; and

25   carrying out said inverse wavelet transform process to a result of said inverse quantization process for the determined process quantity.

20.(Amended) The image decoding method according to claim 12, wherein said coded image data is packed into a plurality of layers,

5   said determining a process quantity comprises:

          determining a number of layers to be decoded based on said process quantities of said coded image data in said inverse quantization process and said

10 process quantity of said coded image data in said inverse wavelet transform process, and

          said carrying out said plurality of image decoding processes comprises:

          carrying out each of said plurality of

15 decoding processes to said coded image data for the determined number of layers to be decoded.

21.(Original) The image decoding method according to claim 20, further comprising:

20   discarding a part of said coded image data other than a part of said coded image data corresponding to the determined number of layers to be decoded.

25 22.(Amended) The image decoding method according to claim 20, wherein said plurality of decoding processes contain an arithmetic decoding process, a bit modeling

decoding process, an inverse quantization process and an inverse wavelet transform process,

each of said plurality of layers of said coded image data contains a plurality of code blocks,

5   said parameter contains a weight coefficient allocated to each of said plurality of code blocks,

said determining a process quantity comprises:

determining a number of coding paths in said 10 arithmetic decoding process and said bit modeling decoding process to each of said plurality of code blocks from said weight coefficients and said unit process time; and

determining a number of bit planes from the 15 determined coding paths, and

said carrying out said plurality of image decoding processes comprises:

carrying out said inverse quantization process and said inverse wavelet transform process to 20 said coded image data for the determined number of bit planes.

23.(Amended) A computer-readable recording medium on which a software is recorded to realize an image 25 decoding method of decoding a decoded image data from a coded image data through a plurality of decoding processes, comprising:

determining a process quantity of said coded

image data in each of said plurality of image decoding

processes within a unit process time based on a

parameter for said coded image data; and

5 carrying out said plurality of image decoding

processes to said coded image data for the determined

process quantities.